Page 1

February 1, 2010 1:24:33 PM

Item ID:

D212-664-207

Accept

Setup Start

Stop

Revision ID:

Item Name:

Required Date: 2/11/10

Crosstube Low Standard Aft

Start Date:

2/04/10

QC:

Start Qty: 1.00

Req'd Qty: 1.00



Cust Item ID:

Customer:

Reference:

Approvals:

Date:

SPC (Y/N):

Date:

Date:

Draw

Rev.

Start Run

Stop

Sequence ID/ **Work Center ID**

Operation Description

Set Up/

Run Hours

Draw Number Plan Code

Reject Accept Qty **Qty**

Reject Number

Insp. Stamp

Draw Nbr

Revision Nbr

D212-664-247

Rev B

100

DOCUMENT CONTROL

Memo

Memo

0.00

Document Control

Photocopy bluefile and create labels as per PPP D212-664-207 CHG001

110

Packaging

Pick Kit

Packaging

0.00

0.00

0.00

Packaging

120

CNC Bend 2

CNC Alpha 160 Bender

Memo

BENDING MACHINE - CROSSTUBES

0.00

0.00

Bend tube as per Dwg D212-664-247 using CNC bender program

Dart	Aeros	pace	Ltd
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W/O:	-		WO	RK ORDER CHANG	SES				<u> </u>	
DATE	STEP	PRO	OCEDURE CHAN	NGE By Date Qty Ch			RE CHANGE By Date Qty Chi		Approval Chief Eng / Prod Mgr	Approval QC Inspector
		,								
Part No	:	PAR #:	Fault Categ	ory:	_ NCR: Yes	No DQA	\ :	Date: _		
Resolution:		solution:	Disposition	QA: N/C C	losed:	Date: _				
NCR:			WORK ORDE	R NON-CONFORM	ANCE (NCI	7)	, , , , , , , , , , , , , , , , , , , ,			
DATE	OTED	Description of NC	ion of NC Corrective Action		Section B		ation	Approval	Approval	
DATE	STEP	Section A	Initial Chief Eng	Action Description Chief Eng	Sign Date	Section Section		Chief Eng	QC Inspector	
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Insp.

Stamp



. February 4, 2010 1:24:33 PM

Accept Setup Start Item ID: D212-664-207 **Revision ID:** Stop Crosstube Low Standard Aft Item Name: Start Qty: 1.00 **Start Date:** 2/04/10 **Cust Item ID:** Required Date: 2/11/10 Req'd Qty: 1.00 **Customer:** Reference: Start Run **Tooling:** Process Plan: Date: Date: Approvals: Stop SPC (Y/N): Date: Date: Reject Plan Accept Reject Set Up/ Draw Draw Sequence ID/ Operation Number Rev. Code Qty Qty Number Description **Work Center ID Run Hours** QC15- Crosstube Dimensional Check 0.00 130 510/03/09 0.00 QC Memo Quality Control 0.00 140 Crosstubes 0.00 Crosstubes Memo 1-Drill Rivet holes as per Dwg D212-664-247 using DT8972.***Use T-Pin*** Crosstubes 2-Drill pilot holes in tube as per Dwg D212-664-247 using DT8550 and DT8551 3-Ream hole to finish size in tube as per Dwg D212-664-247

4-Deburr & Inspect for surface damage. Repair damage within limits as per

5-Scribe part # and batch # using vibrating stylus as per Dwg D212-664-

Dwg D212-664-247

247

Awm -10-3-10

Dart	Aeros	pace	Ltd
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W/O:			WO	RK ORDER CHANGE	S				Ť
DATE	STEP	PRO	OCEDURE CHAN	NGE	Ву	Date	Qty	Qty Approval Chief Eng / Prod Mgr Appro	Approval QC Inspector
Part No		PAR #:							
Resolution:		olution:	Disposition	n:	QA: N/C C	losed:		Date: _	
NCR:		,	WORK ORDE	R NON-CONFORMA	NCE (NCI	3)			
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		Section A	Initial Chief Eng	Action Description Chief Eng	Sign Date	& Sect	ion C	Chief Eng	QC Inspector
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Work Order ID 55919

Page 3

. February 4, 2010 1:24:33 PM

Item ID:

D212-664-207

Accept

Setup Start

Stop

Revision ID:

Start Date:

Item Name:

Required Date: 2/11/10

2/04/10

Crosstube Low Standard Aft

Start Qty: 1.00

Req'd Qty: 1.00

Cust Item ID:

Customer:

Reference:

Approvals:

Process Plan: Date:

Tooling:

0.00

0.00

Date:

Run Start



Date:

SPC (Y/N):

Date:

Stop

Sequence ID/ **Work Center ID**

150

HandFXtube

Operation Description

Crosstubes Chemical Conversion

Memo

Set Up/ **Run Hours**

Draw Number Draw Rev.

Plan

Code

Accept Qty

Reject Qty

Insp. Reject Number Stamp

NB 10-03-10

Hand Finishing Crosstubes

Chemical Conversion Coat Tube & Cuffs

160

Quality Control

QC3- Inspect Part Finish

Memo

Memo

5 woln ly

170

Quality Control

QC5- Inspect part completeness to step on W/O

0.00 Scolon 14

Dart	Aeros	space	Ltd
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W/O:			W	ORK ORDER CHANG	GES					1.
DATE	STEP	PRO	OCEDURE CHA	NGE	ı	Зу	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector
				·						
Part No	:	PAR #:	Fault Cate	gory:	NCR:	Yes N	lo DQA	\:	Date:	
Resolution:										
NCR:			WORK ORD	ER NON-CONFORM	ANCE (NCR)	<u> </u>			
DATE	STEP	Description of NC Corrective Action			Verific			ation	ation Approval	Approval
DAIL	JILI	Section A	Initial Chief Eng	Action Description Chief Eng		Sign & Date	Section	on C	Chief Eng	QC Inspector
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Item ID:	D
Revision ID:	

212-664-207



Setup Start

Stop



Item Name:

Crosstube Low Standard Aft

Start Date: 2/04/10 Required Date: 2/11/10

Start Oty: 1.00 Req'd Qty: 1.00

Cust Item ID: Customer:

Reference:

Ap	provals:	
4 * P	or or wise	

Process Plan:

Date:

Tooling:

0.00

Date:

Run Start



Date:____

SPC (Y/N):

Date:

Stop

Sequence ID/ **Work Center ID**

180

Operation Description

Set Up/ **Run Hours** Draw Number

Plan Draw Rev. Code

Accept Qty

Reject Qty

CX 10/3/11 (1)

CX 10/3/11 0

Reject Insp. Number Stamp

Outsource2

Memo

Outsource process - NDT per QSI038 4.1

0.00

Liquid Penetrant Inspection as per QSI 038 Issue P/O: LPI as per ASTM 1417 Level 2 Attach copy of NDT results to work order

Outsource process - NDT

Receive & Inspect for Damage & Mat'l Certs

Packaging

Memo

Ensure copy of NDT results attached to work order. Packaging

0.00

0.00

200

QC

Packaging

190

OC5- Inspect part completeness to step on W/O

0.00

Memo

0.00

Quality Control

Inspect for damage & ensure results are as per Dwg D212-664-207

Dart Aerospace Li	td
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W/O:			WO	RK ORDER CHANG	BES		•		7	
DATE	STEP	PRO	OCEDURE CHAN	IGE	Ву	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector	
Part No	:	PAR #:	Fault Categ	ory:	NCR: Yes	No DQ	A :	_ Date: _		
	R	esolution:	•	QA: N/C Closed: Date:						
NCR:			R NON-CONFORM	ANCE (NCF	3)					
DATE	STEP	Description of NC	escription of NC Corrective Action				ification Approval		Approval	
		Section A	Initial Chief Eng	Action Description Chief Eng	Sign 8 Date		on C	Chief Eng	QC Inspector	
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Work Order ID 55919	Work	Order ID	55919
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Page 5

Item ID:

D212-664-207

Accept

Setup Start

Revision ID:

Item Name:

Required Date: 2/11/10

Crosstube Low Standard Aft

Start Date:

2/04/10

QC:

Start Qty: 1.00

Req'd Qty: 1.00

Cust Item ID:

Customer:

Reference:

Approvals:

Process Plan:

Date:

Date:_____ **Tooling:**

SPC (Y/N):

0.00

0.00

Date:

Date:

Run

Start

Stop



Stop

Sequence ID/ **Work Center ID**

210

Crosstubes Crosstubes

Operation **Description** Set Up/ **Run Hours** Draw Number Draw Rev.

Plan Qty Code

Accept

Reject Reject Qty

Insp. Number Stamp

10 03

Crosstubes

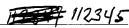
Memo

Memo

1-Rivet and assemble Cuffs with T-Pin in the through bolt holes as per Dwg

D212-664-247. with Sika flex in Between tube & Cuff

A/R SIKAFLEX -241/-291 BATCH:



215

QC

Quality Control

QC5- Inspect part completeness to step on W/O

Inspect cuff with T-Pin

Dart Aerospace Ltd

											
W/O:			WC	RK ORDER CHAN	GES					1	
DATE	STEP	PRO	PROCEDURE CHANGE				Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector	
											
Part No	•	PAR #·	Fault Cate	nory:	NCB: V	es N	lo DO	<u> </u>	Date:		
			#: NCR: Yes No Disposition: QA: N/C Closed								
NCR:				ER NON-CONFORM							
DATE	STEP Description of NC				Section B Veri			ication Approval		Approval	
DAIL	SILP	Section A	Initial Chief Eng	Action Description Chief Eng		gn & ate	Secti	on C	Chief Eng	QC Inspector	
					!						

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Item ID:

D212-664-207

Accept

Setup Start



Revision ID:

Item Name:

Crosstube Low Standard Aft

Start Date:

2/04/10

Start Qty: 1.00

Operation

SprayPaint

Description

Req'd Qty: 1.00



Cust Item ID:

Customer:

Draw

Number

Reference:

Approvals:

Required Date: 2/11/10

Process Plan:

Date:

Date:_____ **Tooling:**

SPC (Y/N):

Set Up/

0.00

0.00

Run Hours

Date:

Date:

Draw

Rev.

Plan

Code

Start



Stop

Sequence ID/ Work Center ID

220



SprayPaint **Spray Painting**

Memo

Spray Painting per QSI005 4.2

1-Prime inside and outside crosstube as per QSI 005 4.2

2-Paint outside crosstube with White Imron as per QSI 005 4.2

PRIME:

Start Time: 9.30 Fininsh Time: 10:30

PAINT:

Start Time: 230 Finish Time: 3:30

230

QC14- Inspect Spray Paint

0.00

0.00

QC

Quality Control

Memo

Wrap in plastic bag to protect from scratches

Run

Stop



Reject Insp.

Number Stamp

Accept

Qty

Reject

Qty

W/O:		WORK ORDER CH	ANGES				1		
DATE	STEP PROCEDURE CHANGE ` I		STEP PROCEDURE CHANGE ` I		P PROCEDURE CHANGE By		Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector
							<u> </u>		

Part No: D212-664-207 PAR #: NF	Fault Category: _	Croshbe	NCR: Yes No DQA:	Date: 10.04.27
Resolution: Re-walc	Disposition:	le-voile	QA: N/C Closed:	Date:

NCR: 5	5919	We	ORK OR	DER NON-CONFORMANCE	(NCR)		-	
DATE	STEP	Description of NC Section A	Initial	Corrective Action Section B Action Description	Sign &	Verification Section C	Approval Chief Eng	Approval QC inspector
10.03.17	220	Some grinding (Line make) marks were glorified when the primer was applied. To be passed LP7: is only cosmeticissue. RC: process		Chief Eng Manking: and not deap sof All, only surface Polish the affected mens: Along the center line in the upper, mid portion! Not a stress when either) Per Alvaline.	Date Aw M 10-3-17	S solostiz	DSIMI	110-03-17
			posium	le prine par clug « paint.	MA 10 /04 /05	5/18/20	Desicus	10.03.17

Work Order ID 559	1	9
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February 4, 2010 1:24:33 PM

Quality Control



Page 7

Item ID: D212-664-207 Accept Setup Start **Revision ID:** Stop Crosstube Low Standard Aft **Item Name:** Start Qty: 1.00 2/04/10 **Start Date: Cust Item ID:** Required Date: 2/11/10 Req'd Qty: 1.00 **Customer:** Reference: Start Run Date: **Tooling:** Approvals: Process Plan: Date: Stop Date:_ SPC (Y/N): Date: Reject Sequence ID/ **Operation** Draw Draw Plan Accept Reject Set Up/ Insp. Work Center ID Description Qty Qty **Run Hours** Number Rev. Code Number Stamp 240 0.00 Crosstubes 10 0.00 Crosstubes Memo 1- Assemble as per Dwg D212-664-247 Crosstubes 2- Lightly scuff the bonded area using a 320 grit sand paper and clean the area with 41058 wash 'n' wipe 3- Instal support with magnobond 6398 per dwg D212-664-247, cure for 12hrs before packaging. 9,00 Time & date of application: #Batch: ハンリン EXP. DATE 01/2011 Torque: M 10.04.07 QC5- Inspect part completeness to step on W/O 250 0.00 QC Memo

	Dart	Aeros	pace	Ltd
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W/O:	r		VV	ORK ORDER CHANG	iES			•	Approval	<u>'</u>		
DATE	STEP	PRO	OCEDURE CHA	ANGE	В	у	Date	Qty	Approval QC Inspector			
14												
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Part No	:	PAR #:	Fault Cate	egory:	NCR: `	 ∕es N	lo DQ	4:	Date:	1		
			olution: Disposition:									
NCR:			WORK ORE	ER NON-CONFORM	ANCE (I	VCR)		-				
DATE STEP		Description of NC	Description of NC Corrective Action			Section B Verification				Approval		
		Section A	Initial Chief Eng	Action Description Chief Eng	Sign & Date		Section C		Approval Chief Eng	QC Inspector		
												

Work Order ID 55919

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February 4, 2010 1:24:33 PM

Item ID:

D212-664-207

Accept

Setup Start

Stop

Revision ID:

Item Name:

Required Date: 2/11/10

Crosstube Low Standard Aft

Start Date:

2/04/10

Start Qty: 1.00

Req'd Qty: 1.00

Date: _____

Cust Item ID: Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

SPC (Y/N):

Set Up/

Date:

Draw

Number

Date:

Draw

Rev.

Plan

Code

Start Stop

Insp.

Stamp

Sequence ID/ Work Center ID

255

Packaging Packaging

Operation Description

Pick Kit

QC: _____

Memo

Run Hours

0.00

0.00

Qty

Reject

Run

Reject

Number

260

Quality Control

QC4-100% Inspect kits for completeness

Accept

Qty

270

Packaging

Packaging

Memo

Memo

0.00

0.00

Packaging

Identify and pack for shipping as per PPP D212-664-207

NUA

Dart Aerospace Ltd

									
W/O:		***	WC	RK ORDER CHANG	ES				ı
DATE	STEP	PRO	OCEDURE CHAI	NGE	Ву	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector
			v						
Part No	:	PAR #:	Fault Cate	gory:	_ NCR: Yes	No DQ	A:	Date: _	
Resolution:			Disposition	_ QA: N/C CI	osed:		Date:		
NCR:		,	WORK ORD	ER NON-CONFORMA	NCE (NCR)		-	
DATE	STEP	Description of NC	tion of NC Corrective Action		Section B Verific			Approval	Approval
	-	Section A	Initial Chief Eng	Action Description Chief Eng	Sign & Date	Secti	on C	Chief Eng	QC Inspector
									
<u> </u>									1
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Work Order ID 55919

Page 9

February 4, 2010 1:24:33 PM

Required Date: 2/11/10

Item ID:

D212-664-207

Accept



Setup Start

Stop



Revision ID:

Item Name:

Crosstube Low Standard Aft

Start Date:

2/04/10

Start Qty: 1.00

Req'd Qty: 1.00

Operation

Description



Cust Item ID:

Customer:

Reference:

Approvals:

Process Plan:

Date: _____

Tooling:

Date:

Draw

Number

Run

Start



QC:

Date:

SPC (Y/N):

Set Up/

Run Hours

Date:

Rev.

Stop

Sequence ID/ Work Center ID

280

Memo

QC21- Final Inspection - Work Order Release

0.00

Plan Draw Accept

Code

Reject Qty

Qty

Reject Number Insp. Stamp

Quality Control

0.00

Dart Aerospa	ace Ltd
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W/O:			GES			<u> </u>		.) .				
DATE	STEP	. PR	OCEDURE CHA	CEDURE CHANGE			Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector		
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Part No	:	PAR #:	Fault Cate	gory:	_ NCF	: Yes	No DQ	A :	Date:			
	R	esolution:				QA: N/C Closed: Date:						
NCR:		·	WORK ORD	ER NON-CONFORM	ANCE	(NCR)	···				
DATE	DATE STED Description of NC		Corrective Action Section B			Variticati			Approval	Approval		
DATE STEP		Section A	Initial Chief Eng	Action Description Chief Eng	n Sign & Date		Section C		Chief Eng	QC Inspector		
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Picklist Print Work Order ID: 55919 Parent Item:

February 4, 2010 1:24:36 PM

D212-664-207

Parent Item Name: Crosstube Low Standard Aft

Comments:

IPP Rev:A New Issue 07.09.12 EC verified by: JLM

IPP Rev:B ECN 1100p 08-01-11 DD verified by: EC IPP Rev:C ECN 1121 08-02-25 DD verified by:eC

IPP Rev: D QC5 replaced by QC15 at step 5 KJ Verified by: ec



Start Date: 2/04/10

Start Qty: 1.00

Required Date: 2/11/10

Required Qty: 1.00

D212-664-2071RN

Manufactured

No

110

Each

8.0000

1.0000

Crosstube Turning Detail

Warehouse	Loc Qty	Loc Code
Location		
Main Warehouse		
FG	8	
50678	1	
50688	1	
50879	1	
50880	1	
51377	1	
51378	1	
54498	4	
54499	(1)	
	140 Each	15.0000 2

ALM 10-3-2

D3660-1

Manufactured

2.0000

CUFF

Warehouse	Loc Oty	Loc Code	
Location			
Main Warehouse			
ST	5		
51394	5		AWM 10-03.07
Main Warehouse			1
ST477	10		
53501	10		

Dart Aerospace Ltd	Dart	Aeros	pace	Ltd
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W/O:			WO	RK ORDER CHANG	ES				,
DATE	STEP	PROCEDURE CHANGE			Ву	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector
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Part No	:	PAR #:	Fault Categ	jory:	NCR: Yes	No DQ	A:	Date: _	
	Re	solution:	Disposition	:	_ QA: N/C CI	osed:	-	Date:	
NCR:			WORK ORDE	ER NON-CONFORMA	NCE (NCR)			
DATE	STEP	Description of NC		Corrective Action Section		Verific	cation	Approval	Approval
	OIL!	Section A	Initial Chief Eng	Action Description Chief Eng	Sign & Date	Secti	on C	Chief Eng	QC Inspector
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February 4, 2010 1:24:36 PM

Work Order ID: 55919

Parent Item:

D212-664-207

Parent Item Name: Crosstube Low Standard Aft

Comments:

IPP Rev:A New Issue 07.09.12 EC verified by: JLM

IPP Rev:B ECN 1100p 08-01-11 DD verified by: EC IPP Rev:C ECN 1121 08-02-25 DD verified by:eC

IPP Rev: D QC5 replaced by QC15 at step 5 KJ Verified by: ec

Start Date: 2/04/10

Required Date: 2/11/10

Start Qty: 1.00

Required Qty: 1.00

CR3212-4-06

Purchased

No

220

Each

1,706.000 44.0000

CHERRY RIVET

Warehouse	<u>Lo</u>	e Qty	Loc Code	
Location				
Main Warehouse				
ST		1706		
107534		6		
112492		200		
112612		500		
112724		200		
112794		800		
	240	Fach	156 0000	4 0000

D3595-063-530

Manufactured

No



RUBBER CUSHION

Warehouse Location	Loc Qty	Loc Code	m	10,04,06
Main Warehouse			`	
ST	156			
40780	2			
44998	2			
50030	48			
51776	104			

Dart Aerospace Ltd

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W/O:			WC	ORK ORDER CHANGI	ES				•
DATE	STEP	PRO	PROCEDURE CHANGE			Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector
Part No	:	PAR #:	Fault Cate	gory:	NCR: Yes	No DQ	A :	Date:	<u> </u>
	Re	esolution:	Dispositio	n:	_ QA: N/C Clo	osed:		Date: _	· · · · · · · · · · · · · · · · · · ·
NCR:			WORK ORD	ER NON-CONFORMA	NCE (NCR)	-		
DATE	STEP	Description of NC	Corrective Action Section B			Verific			Approval
	JILI	Section A	Initial Chief Eng	Action Description Chief Eng	Sign & Date	Secti	on C	Chief Eng	QC Inspector
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Picklist Print

February 4, 2010 1:24:36 PM

Page 3

Work Order ID: 55919

Parent Item: D212-664-207

Parent Item Name:

Comments:

Crosstube Low Standard Aft

EC verified by: JLM IPP Rev:A New Issue 07.09.12

IPP Rev:B ECN 1100p 08-01-11 DD verified by: EC IPP Rev:C ECN 1121 08-02-25 DD verified by:eC

IPP Rev: D QC5 replaced by QC15 at step 5 KJ Verified by: ec

Start Date: 2/04/10

Required Date: 2/11/10

Start Qty: 1.00

Required Qty: 1.00

D2940-1

Manufactured No 240

Each

47.0000 2.0000

Support

Warehouse Location	Loc Oty	Loc Code	mil in oil al
			W1 10 04 06
Main Warehouse			
ST	47		
24367	4		
25594	2		
45203	1		
47748	20		
52752	20		

Dart Aerospace	Ltd
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W/O:			W	ORK ORDER CHANG	ES				,
DATE	ATE STEP PROCEDURE CHANGE By					Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector
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						,			
Part No	•	PAR #:	Fault Cate	gory:	_ NCR: Ye	s No DC	A:	Date: _	
	Re	esolution:	Dispositio	n:	_ QA: N/C	Closed:		Date: _	
NCR:		,	WORK ORD	ER NON-CONFORMA	NCE (NC	R)			
DATE STEP		Description of NC			· · · · · · · · · · · · · · · · · · ·			ication Approval	
DAIL	JILI	Section A	Initial Chief Eng	Action Description Chief Eng	Sigr Dat	K Sec	Section C	Chief Eng	Approval QC Inspector
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Required Date: 2/11/10

Required Qty: 1.00

February 4, 2010 1:24:36 PM

Work Order ID: 55919

D212-664-207

Parent Item Name:

Crosstube Low Standard Aft

Comments:

Parent Item:

EC verified by: JLM IPP Rev:A New Issue 07.09.12 IPP Rev:B ECN 1100p 08-01-11 DD verified by: EC

IPP Rev:C ECN 1121 08-02-25 DD verified by:eC

IPP Rev: D QC5 replaced by QC15 at step 5 KJ Verified by: ec

MS21920-28

Purchased

No

240

Each

168.0000 4.0000

Start Date: 2/04/10

Start Qty: 1.00

Clamp(per MIL-DTL-8783C)

Warehouse	Loc Oty	Loc Code	
Location			
Main Warehouse			
CA	50		
113776	50		
OFFSHORE			
FG	5		
105884	5		
Main Warehouse			
ST	113		***
106864	5		
108466	9		
108847	7		
109181	14		
109965	2		
111281	2		
111734	6		
112624	18		

50

112863

Dart Aerosp	ace Ltd
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W/O:			WC	ORK ORDER CHANG	ES			•
DATE	STEP	PRO	PROCEDURE CHANGE			Date Qty	Approval Chief Eng / Prod Mgr	Appřoval QC Inspector
			4.2					
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February 4, 2010 1:24:36 PM

Work Order ID: 55919

Parent Item:

D212-664-207

Parent Item Name:

Crosstube Low Standard Aft

Comments:

IPP Rev:A New Issue 07.09.12 EC verified by: JLM IPP Rev:B ECN 1100p 08-01-11 DD verified by: EC

IPP Rev: D QC5 replaced by QC15 at step 5 KJ Verified by: ec

IPP Rev:C ECN 1121 08-02-25 DD verified by:eC

Manufactured

No

255

Each

23.0000

1.0000

Start Date: 2/04/10 Start Qty: 1.00

Placard

D3428-1

Warehouse	<u>Lo</u>	c Qty	Loc Code	
Location				
Main Warehouse				
ST096		23		
50790		3		
55565		20		
	255	Each	414.0000	6.0000

MS21042L6

Purchased

No



55565

Required Date: 2/11/10

Required Qty: 1.00



Nut

Warehouse	Loc Oty	Loc Code	
Location			
Main Warehouse			
ST	414		
105077	22		
110002	5		
111548	2		 0
111578	385		1/1578

Dart Aerospace Ltd

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Part No	:	PAR #:	Fault Cate	egory:	NCF	l: Yes I	10 DQ .	A :	Date:	
_	Re	solution:	Disposition	on:	QA:	N/C Clo	sed:	<u>.</u>	Date:	
NCR:			WORK ORE	ER NON-CONFORM	ANCE	(NCR				
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	J.L.	Section A	Initial Chief Eng	Action Description Chief Eng		Sign & Date	Secti	on C	Chief Eng	QC Inspector

Picklist Print

February 4, 2010 1:24:36 PM

Work Order ID: 55919

D212-664-207

Parent Item Name:

Crosstube Low Standard Aft

Comments:

Parent Item:

EC verified by: JLM IPP Rev:A New Issue 07.09.12

IPP Rev:B ECN 1100p 08-01-11 DD verified by: EC IPP Rev:C ECN 1121 08-02-25 DD verified by:eC IPP Rev: D QC5 replaced by QC15 at step 5 KJ Verified by: ec

AN960JD616

Purchased

Purchased

No

No

255

Each

509.0000 18.0000



Start Date: 2/04/10

Start Qty: 1.00

Required Date: 2/11/10

Required Qty: 1.00

Page 6

Warehouse	Loc	<u>e Oty</u>	Loc Code	
Location				
Main Warehouse				
ST		509		
112314		3		
112828		206		
113149		300		
	255	Each	114.0000	4.0000



Bolt

<u>Warehouse</u>	Loc Qty	Loc Code
Location		
Main Warehouse		
ST	114	
112612	1	
112679	13	
112828	50	
113422	50	

1/3/49 (/1/4/2 ()

Dart Aerospace Ltd

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W/O:		WORK ORDER CHANGES					,		
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Required Date: 2/11/10

Required Qty: 1.00

February 4, 2010 1:24:36 PM

Work Order ID: 55919

Parent Item:

Parent Item Name:

D212-664-207

Crosstube Low Standard Aft

Comments:

EC verified by: JLM IPP Rev:B ECN 1100p 08-01-11 DD verified by: EC IPP Rev:C ECN 1121 08-02-25 DD verified by:eC

IPP Rev:A New Issue 07.09.12

IPP Rev: D QC5 replaced by QC15 at step 5 KJ Verified by: ec

AN6-41A

Purchased

No

255

Each

98.0000

2.0000

Start Date: 2/04/10 Start Qty: 1.00

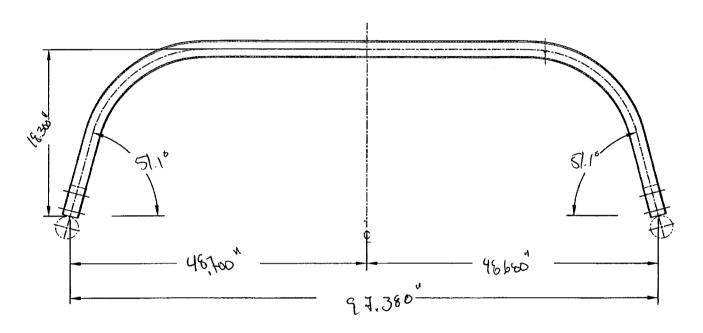
Warehouse	Loc Qty	Loc Code	
Location			
Main Warehouse			
ST	98		
111605	3		
112489	20		112487
112805	25		
113288	50		

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DART AEROSPACE LTD	Work Order:	55919
Description: Crosstube Low Aft (205/212) B 10.03 = 2	Part Number:	D212-664-207
Inspection Dwg: D212-664-247 Rev: KB		Page 1 of 1

Required Dimension	Min	Max
Height	18.16	18.42
1/2 Span	48.55	48.81
Angle	49	52
Total Span	97.1	97.62



	Comments	

QC15 Inspection	5, 1	
Date	(dol07	

Rev	Date	Change	Revised by	Approved
Α	08.02.29	New Issue	KJ/JM	m

Dart Aero	space	Ltd
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NCTE: Date & initial all entries

CORMS\Quality Assurance\approved QA\NCRWO RevE

ltem	Qty -247	Qty -247B	Part Number	Description
1	X		D212-664-247	CROSSTUBE ASSEMBLY (205/212 LOW AFT)
2		Х	D212-664-247B	CROSSTUBE ASSEMBLY (214 LOW AFT)
3	1	11	D6008-132	CROSSTUBE
4	2	2	D2940-1	SUPPORT
5	4	4	D3595-063-530	RUBBER CUSHION
6	2	2	D3660-1	CUFF
7	4	4	MS21920-28	CLAMP (OR MS21920-30)
8	44	44	CR3212-4-06	RIVET (OR M7885/3-4-06)
9	A/R	A/R	MAGNOBOND 6398	ROCKWELL SPECIFICATION RBO-120-023 ADHESIVE (TEXTRON/BELL SPEC. 299-947-100, TYPE II, CLASS 2 ADHESIVE)
10	A/R	A/R	SIKAFLEX-241/-291	SEALANT (OR PROSEAL 890 OR MIL-S-8802 CLASS B2 SEALANT)

GENERAL NOTES:

- 1) MATERIAL: MANUFACTURED FROM D6008-132
- FINISHED LENGTH = 128.268±0.020 (BEFORE BENDING/TRIMMING)
- 2) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
 PRIME INSIDE AND OUTSIDE PER DART QSI 005 4.2
- PAINT OUTSIDE PER DART QSI 005 4.2
 TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED.
 UNITS: INCHES UNLESS OTHERWISE NOTED.
- BREAK SHARP EDGES: 0.005 TO 0.010 MAX.
- IDENTIFICATION: SCRIBE DART PART NUMBER "D212-664-XXX" AND BATCH NUMBER ON INSIDE OF CUFF
- USING VIBRATING STYLUS.
 7) WEIGHT: D212-664-247 = 36.6 lbs (PER IIN-D212-664)
 D212-664-247B = 36.6 lbs (PER IIN-D212-664)
- PART IS SYMMETRIC ABOUT CENTERLINE.
 WHEN MACHINING TAPER, RUN CUTTER OFF PART. BLEND OUT EDGE LONGITUDINALY, TRANSITION SHOULD
- 10) BEND PROGRESSIVELY WITH A MINIMUM OF 8 PASSES. MAXIMUM TUBE FLATTENING DUE TO BENDING IS 6% BASED ON O.D., EXCEPT UP TO 10% IS ALLOWED IN AREA NOTED.
- 11) LIQUID PENETRANT INSPECT OUTSIDE SURFACE OF CROSSTUBE PER QSI 038.

 12) INSTALL D2940-1 SUPPORTUSING 0.03' TO 0.06' THICK LAYER OF MAGNOBOND 6398 TO THE SURFACE OF D2940-1 THAT WILL BE IN CONTACT WITH THE CROSSTUBE PER QSI 015. LET CURE FOR 12 HOURS AFTER INSTALLATION AND PRIOR TO PACKAGING.
- 13) INSTALL MS2 1920-28 CLAMPS (OR -30) WITH D3595-063-530 RUBBER CUSHIONS TO SECURE THE D2940-1
- SUPPORT ON TOP SIDE OF THE CROSSTUBE. ENSURE CLAMPS ARE OPPOSITE OF CROSSTUBE SUPPORT.

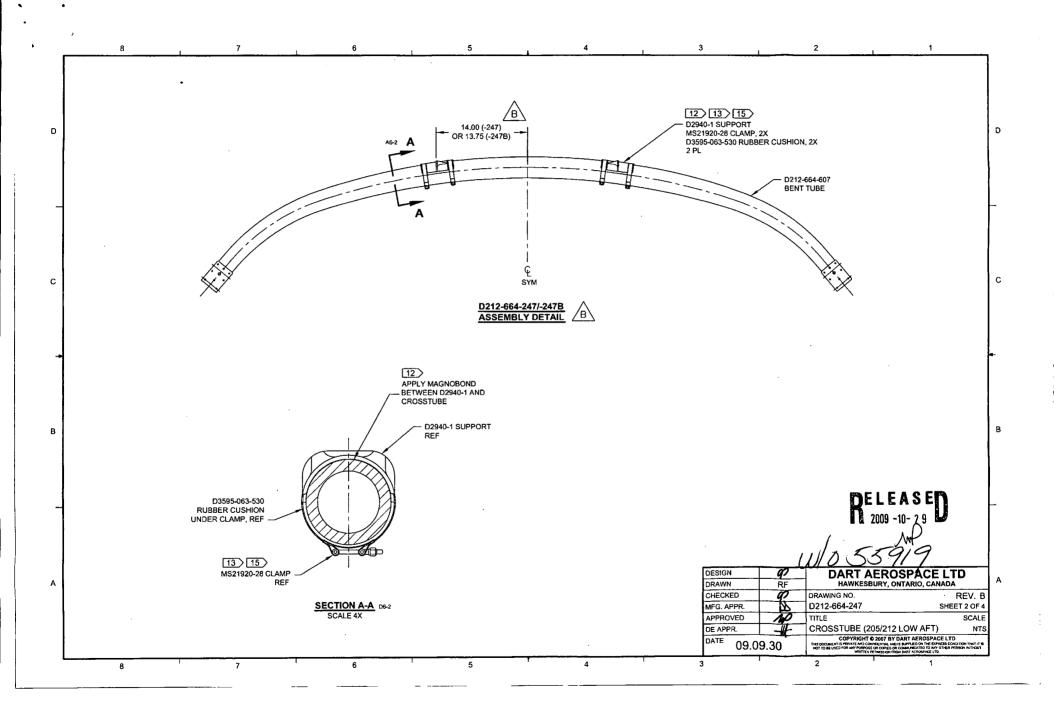
 14) EXTREME CARE MUST BE TAKEN TO PROTECT THE OUTSIDE SURFACE OF THE TUBE. THE OUTSIDE SURFACE MUST BE SMOOTH AND FREE FROM SURFACE DEFECTS SUCH AS SCRATCHES, NICKS, OR DENTS. DEFECTS UP TO 0,005" MAY BE BLENDED OUT LONGITUDINALLY. CIRCUMFERENTIAL GRIND MARKS ARE
- 15) TORQUE CLAMES 80 TO 100 IN-LB. ENSURE AT LEAST 1.5 THREADS SHOWING IN SAFETY AND THAT NUT HAS NOT BOTTOMEO-OUT AFTER TORQUING.

 16) INSTALL D3660-1 CUFF AFTER CHEMICAL CONVERSION COAT BUT BEFORE PAINT, WITH A LAYER OF
- SIKAFLEX-241/-291 OR PROSEAL 890 OR MIL-S-8802 CLASS B2 SEALANT BETWEEN CUFF AND CROSSTUBE. SEAL EDGE OF CUFF TO ENSURE NO GAPS.
- 17) TOUCH-UP HOLES WITH CHEMICAL CONVERSION COAT.

SHOP COPY **RETURN TO ENGINEERING** UNCONTROLIED COTY SUBJECT TO AMENDA: WITHOUT NOTICE

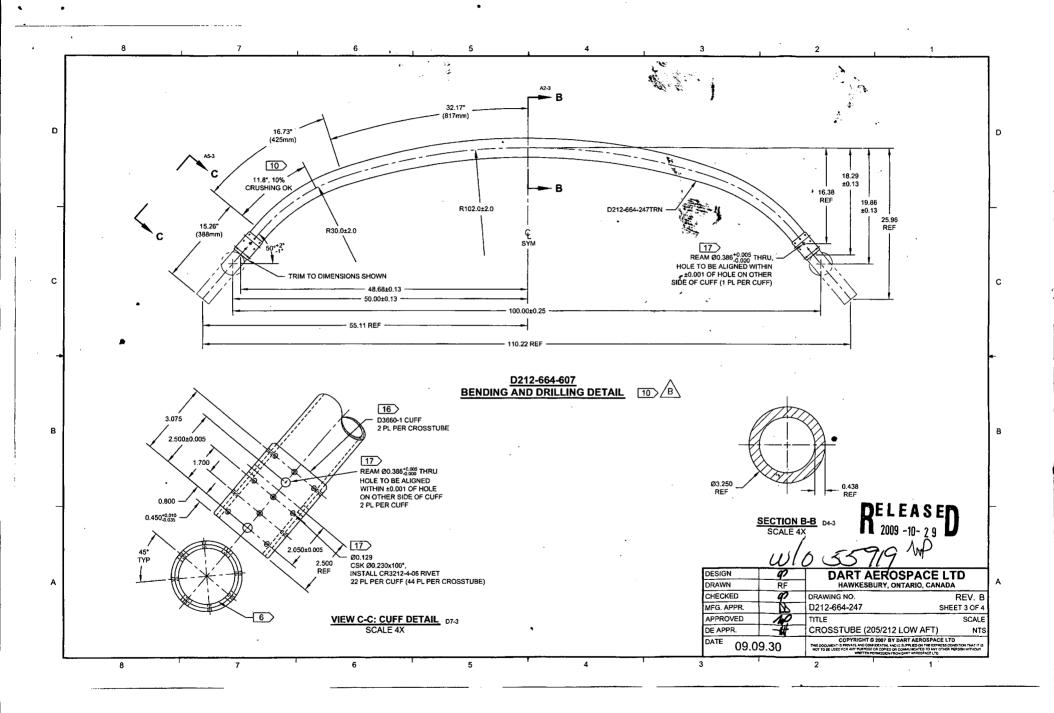
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DATE 09.09.30			COPYRIGHT © 2007 BY DART A THIS DOCUMENT IS PRIVATE AND COMPIDENTIAL AND IS SUPPLY NOT TO BE USED FOR ANY PURPOSE OR COMED OF ROMANN WISTITM PERMASSION FROM OATS.	ED ON THE EXP	RESS CONDITION THAT IT IS OTHER PERSON WITHOUT

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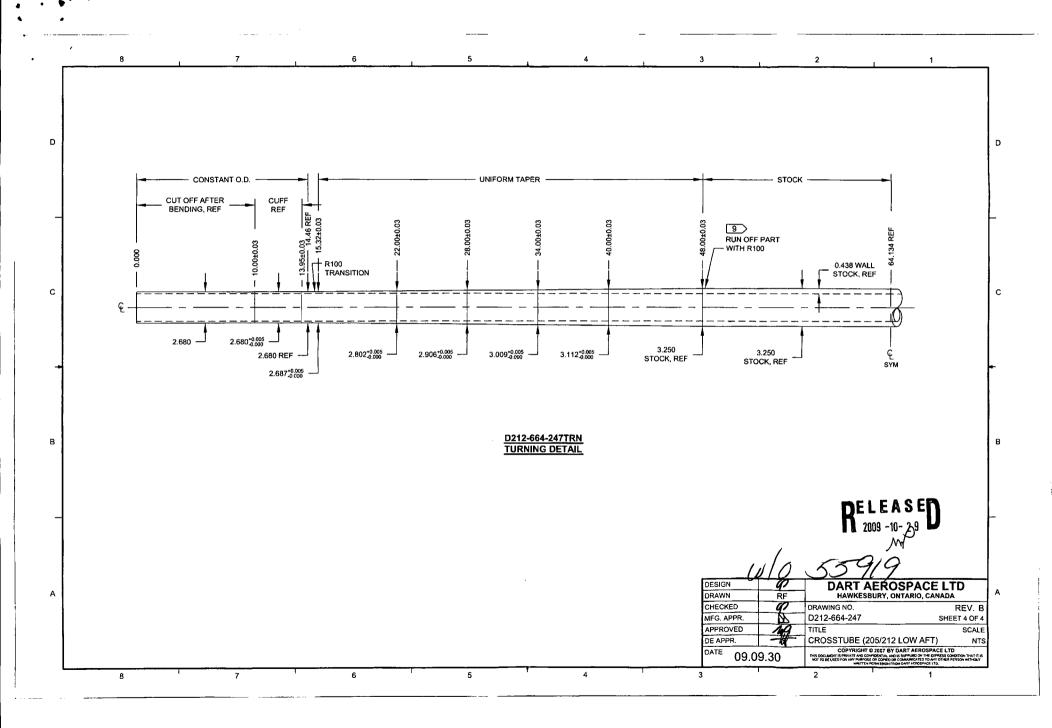
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LIQUID PENETRANT TEST REPORT

P- 15319

ACUREN	LIQUID F	LINETRANT 1EST	REPORT	·
	P	,	Page	/ OF Å _
CLIENT DAR	1 Acrostace	DATE MA	2cf 11-2010 TIME	AM Z PM 🗆
ATTENTION 4	NDA/CHANTEL	ACUREN JOB NO.	188-10-0	•
ADDRESS 1270	ABELDEEN ST.	PO/WO No.	11499	7 O F)
MAUNE	^	1K7 WORK LOCATION	SKAP	
7.07033	7.67		574 1417/ REV./D/	7007
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JOB DESCRIPTION	PROCEDURE No. LT-002R	EV./DATE 2007 TECH	NIQUE NO. LT-TGHZ REV./D/	ATE 2007
PARTNO. STA	NEESS STEEL		UE ALLIANUTHICKNESS	
SCOPE NOTET			ETRANT INSP	Ec Town
<u> </u>		The second of th	ENDAL	
TEST DETAILS				
	FLUORESCENT UVISIBLE	WATER WASH	☐ SOLVENT REMOVABLE	☐ Post Emulsified
FAMILY BRAND MACN	AFLUX	BLACK LIGHT S/N /6	€57 □ OUTPUT > 1000 μ W/cm²	☐ AMBIENT < 2 fc
PENETRANT 24 67			ASHLIGHT 🗆 TROUBLELIGHT 🗀 OU	TPUT>100 fc@ SURFACE
PENETRANT REMOVER DEVELOPER	MINIMUM DRY TIME >10 MINIMUM DWELL TIME 10		2	UE DATE
	NAQUEOUS AQUEOUS			UT 3-20 0
TEST SURFACE				
	GROUND AS WELDED	MACHINED MACHINED		CLEAN BARE METAL
SURFACE TEMPERATURE □ < - RESULTS- (□ ME		0 10°C/50°F	10°C/50°F TO 52°C/125°F □	> 52°C/125°F
1 CROSTUBEL 1 CROSTUBE 1 CROSSTUBE	w.e. 559191 / = w.o. 55920 / s w.c. 56335 /	60,	los 112	
that all descriptions, comments and expression representations or warranties. Acuren Group data or other information provided by Acuren Standard of Care in performing the services provided. Acuren Gimplied, is made or intended by Acuren Group SIGNATURES	-17	en Group Inc. based on information and assumptic crator and the owner/operator retains complete re, y in respect of the services referred to herein excec	ms supplied by the owner/operator and are not inte spensibility for the engineering, manufacture, repa- d the amount paid for such services. ning such services in the same or similar locality.	nded nor can they be construed as ir and use decisions as a result of the No other warranty, expressed or
CLIENT REPRESENTATIVE	Tevi litted	SIGNATURE	DTR# E -	63352
TECHNICIAN (SIGNATURE):	11/-		REPORT REVIEWED BY:	
NAME (PRINT):	YNE votos Son		NAME	INITIALS
	SB LEVEL SNT LEVEL SB REG. NO 6 6 6 6	CGSB LEVEL SNT LEVEL		